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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,788	08/01/2001	Gordon James Yorke	OR02-13501	5192

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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/920,788	Applicant(s) YORKE ET AL.	
	Examiner Lewis A. Bullock, Jr.	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,11-13,15,16,20-24,28,29 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,11-13,15,16,20-24,28,29 and 31-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 5, 7, 11-13, 15, 20-22, 24, 28, 29 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by ROTHROCK (U.S. Patent 5,408,470).

As to claim 1, ROTHROCK teaches a method for providing object change information (blocked object changes) from a first system (participant system) to a second system (another participant system) for synchronizing (deferred synchronizing) the second system with the first system, the second system having an object cache for storing objects (local memory / associated media device storing objects) (col. 4, lines 59-65), the method comprising the steps of: changing an object in the first system (via participant / arbitrator adding, modifying, or deleting an object); determining an object change set (blocked change information containing index of the changed object) which changes made to the object in the first system; and sending the object change set (blocked change information containing index of the changed object) from the first

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system (requesting participant) to the second system (participant / arbitrator) to cause the second system to apply the object change set (synchronize the object change) to the corresponding object in the second system's cache so as to synchronize the second system with the first system (col. 9, line 60 – col. 12, line 46) wherein control is returned to a client coupled to the first system whether or not the second system has completed processing the object change set (via deferred synchronization wherein the client / human interface / agent can continue to perform local changes regardless if the previous changes have been synchronized yet) (col. 10, lines 45-64 in particular lines 58-64; col. 11, line 50 – col. 12, line 13; col. 1, lines 37-53; col. 4, line 65 – col. 5, line 5; col. 6, line 60 – col. 7, line 25). ROTHROCK also teaches that object managers of the participants keeps track of participants such as when a participant joins the meeting that after the joining their objects are synchronized (col. 7, lines 47-54). Therefore, it is inherent within the teachings of ROTHROCK that a system (participant) registers to the first system (initial participant) prior to the distribution of the change information from the first system to the second system since the first system synchronizes the local changes to the remote participants after they are approved by the arbitrator and therefore must know the other registered participants in the meeting.

As to claim 2, ROTHROCK teaches a communication link between the first system and the second system (communication medium between participants) (col. 6, lines 14-30; col. 4, lines 42-48) and that object managers of the participants keeps track of participants such as when a participant joins the meeting that after the joining their

objects are synchronized (col. 7, lines 47-54). It is inherent within the teachings of ROTHROCK that when a participant joins a meeting a communication link is established between the joining participant and the meeting participant such that changing of an object in the meeting is propagated to the other participants including the joining participant.

As to claim 5, ROTHROCK teaches sending the object change information to a database (arbitrator's copy of objects) for updating the object in the database with the object change information (via sending the change regarding the object to another participant for synchronization with that copy of the object) (col. 9, line 60 – col. 12, line 46).

As to claim 7, ROTHROCK teaches the first system (participant) includes an object cache for storing one or more objects (memory storing local copy of object), and the method further comprises a step of merging the object change information into the object cache of the first system (via sending the change regarding the object to another participant for synchronization with that copy of the object) (col. 9, line 60 – col. 12, line 46).

As to claim 11, ROTHROCK teaches the first system (participant) includes a cache for storing one or more objects (memory storing local copy of object), the method further comprising the steps of: receiving object change information (blocked change

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information containing index of the changed object) distributed from the second system (participant) and containing information of changes made to one or more objects in the second system (changes made by the participant); and merging the object change information (blocked change information containing index of the changed object) received from the second system (participant) into the objects in the cache of the first system to synchronize the first system with the second system (via deferred synchronization between any participants) (col. 9, line 60 – col. 12, line 46).

As to claims 12, 13, 15 and 20, refer to claims 1, 2, 5, 7 and 11 for rejection.

As to claims 21 and 22, reference is made to an apparatus, i.e. synchronization executor that corresponds to the method of claims 1 and 2 and is therefore met by the rejection of claims 1 and 2 above. Claim 21 further details the system comprising a synchronization manager for obtaining object change information representing a change made to an object in the first system. ROTHROCK teaches the system comprising a synchronization manager (object manager) for obtaining object change information representing a change made to an object in the first system (participant system) (col. 6, line 60 – col. 7, line 18).

As to claim 24, ROTHROCK teaches a connector (multi-point function) for obtaining the object change information that is distributed from the second system (col. 6, lines 14-30).

As to claims 32-34, reference is made to a computer readable medium, an electric signal, and a computer program product that corresponds to the method of claim 1 and is therefore met by the rejection of claim 1 above.

As to claim 28, ROTHROCK teaches a persistence system (participant) for synchronizing an object (object) on a network, the network including a caching system (another participant) having an object cache for storing objects (memory storing local copy of object), the persistence system comprising: a transaction manager (human interface layer / object manager) for changing an object and determining an object change set (blocked change information containing index of the changed object) which represents changes made to the object (via the sending of annotations regarding a meeting object to be synchronized among participants) (col. 7, lines 13-18; col. 8, line 47 – col. 9, line 22; col. 10, lines 1-25); and a synchronization executor (object manager / multi-point process) for obtaining the object change set from the transaction manager and distributing the object change set to the caching system (another participant) to cause the caching system to apply the object change set to the corresponding object in the cache so as to synchronize (via deferred synchronization / the object manager forwards the synchronization information to the other participants through the multi-point process) the object in the object cache with the changed object in the persistence system (col. 6, line 14 – col. 7, line 25; col. 9, line 60 – col. 12, line 46) wherein control is returned to a client coupled to the first system whether or not the second system has

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completed processing the object change set (via deferred synchronization wherein the client / human interface / agent can continue to perform local changes regardless if the previous changes have been synchronized yet) (col. 10, lines 45-64 in particular lines 58-64; col. 11, line 50 – col. 12, line 13; col. 1, lines 37-53; col. 4, line 65 – col. 5, line 5; col. 6, line 60 – col. 7, line 25). ROTHROCK also teaches that object managers of the participants keeps track of participants such as when a participant joins the meeting that after the joining their objects are synchronized (col. 7, lines 47-54). Therefore, it is inherent within the teachings of ROTHROCK that a caching system (participant) registers to the persistence system (initial participant) prior to the distribution of the change information from the persistence system to the caching system since the persistence system synchronizes the local changes to the remote participants after they are approved by the arbitrator and therefore must know the other registered participants in the meeting.

As to claim 29, ROTHROCK teaches a persistence system cache for storing one or more objects (memory storing local copy of object) (col. 4, lines 42-65).

As to claim 31, ROTHROCK teaches the synchronization executor communicates over the network (col. 6, lines 14-30), and the dispatcher distributes the object change information via the network (col. 7, lines 47-54). It is inherent within the teachings of ROTHROCK that when a participant joins a meeting a communication link is established between the joining participant and the meeting participant such that

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changing of an object in the meeting is propagated to the other participants including the joining participant.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over ROTHROCK (U.S. Patent 5,408,470).

As to claim 3, ROTHROCK teaches communications medium is any type of communications medium using any one of the various networking standards (col. 6, lines 14-25). Official Notice is taken in that publish/subscribe protocol is a well known communication standard and therefore would be obvious in view of ROTHROCK in order to communicate change information.

As to claims 23, refer to claim 3 for rejection.

5. Claims 1-3, 5, 7, 11-13, 15, 20-23, 24, 28, 29 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over ZHU (U.S. Patent 6,792,436) in view of ROTHROCK (U.S. Patent 5,408,470).

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As to claims 1, 2, 5, 7, 11-13, 15, 20-22, 24, 28, 29 and 31-34, ZHU teaches a method for providing object change information (change request / transaction information) from a first system (sender) to a second system (receiver) for synchronizing (synchronizing) the second system with the first system, the second system having an object cache for storing objects (local cache of objects), the method comprising the steps of: changing an object in the first system (via sender creating, updating, or deleting an object); determining an object change set (change request / transactional information) which represents changes made to the object in the first system wherein the object change set includes: a primary key value that identifies the object; and a set of attribute changes which contain the attribute names and the new attribute values of attributes that were changed in the object (via the object change set includes the object and its associated changes to the attributes with the non changes to the attributes); and sending the object change set (change request / transaction information) directly from the first system (sender) to the second system (receiver) to cause the second system to apply the object change set (synchronize the object) to the corresponding object in the second system's cache so as to synchronize the second system with the first system (col. 6, line 35 – col. 7, line 45). ZHU also teaches that the sender system synchronizes a change with the receiver system once the database has approved of the change (col. 6, line 35 – col. 7, line 45). Therefore, it is inherent within the teachings of ZHU that the receiving system must register to sending system prior to the distribution of the change information from the sending system to the receiving system since the local changes to the sending system are sent after they are approved by the database and therefore the

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sending system must know the other registered system in order to send it the changes. ZHU also teaches both systems have caches, the sending of the change information (change request / transaction information) to a database (central database) wherein the database determines if an error message (update / delete / create has failed) should be sent, the merging of change information with the object caches (fig. 3, step 128); the sending of minimal information within the change information (col. 6, lines 12-28), a primary key (primary key / OCAs) sent with the change information, and a change in attribute of an object (col. 6, line 35 – col. 7, line 45; fig. 3). However, ZHU does not teach control is returned to a client coupled to the first system whether or not the second system has completed processing the object change set.

ROTHROCK teaches a synchronization system between a plurality of object systems wherein control is returned to a client coupled to the first system whether or not the second system has completed processing the object change set (via deferred synchronization wherein the client / human interface / agent can continue to perform local changes regardless if the previous changes have been synchronized yet) (col. 10, lines 45-64 in particular lines 58-64; col. 11, line 50 – col. 12, line 13; col. 1, lines 37-53; col. 4, line 65 – col. 5, line 5; col. 6, line 60 – col. 7, line 25). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of ZHU with the teachings of ROTHROCK in order to facilitate more relaxed timing requirements between a client and server such that the real-time annotations are coordinated without the latency of such operations (col. 13, lines 24-50).

As to claim 3, ZHU teaches the invention is implemented in a wide range of digital computing network configurations (col. 4, lines 52-65; col. 10, lines 6-38). Official Notice is taken in that publish/subscribe protocol is a well-known network communication configuration and therefore would be obvious in view of ZHU in order to communicate object change information.

As to claims 23, refer to claim 3 for rejection.

6. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over ROTHROCK (U.S. Patent 6,792,436) in view of ZHU (U.S. Patent 6,792,436).

As to claim 6, ROTHROCK teaches the synchronization of objects within agents (col. 6, line 60 – col. 7, line 7). However, ROTHROCK does not teach receiving an error message from the database when the updating fails.

ZHU teaches synchronization of object systems comprising the steps of receiving an error message from the database when the updating of the object in the database fails (col. 6, lines 65-67; col. 7, lines 8-9; col. 7, lines 12-14). It would be obvious to one skilled in the art at the time of the invention based on the combination that since the agents of ROTHROCK must synchronize with the arbitrator's copy of objects, i.e. the central database of ZHU, that if the database fails to make the change then the change information must be discarded and not distributed to the other agents. Therefore, it would be obvious to one skilled in the art to combine the teachings of ROTHROCK with

the teachings of ZHU in order to facilitate the synchronization of individual caches without having to constantly query the central database (col. 3, lines 31-34).

As to claim 16, refer to claim 6 for rejection.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 33 and 34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The cited claims detail an electric signal and a computer program product **for** execution in a computer having a method comprising of steps or modules. Both are considered non-statutory. Claim 34 is directed toward a program which without its corresponding storage medium would be non-statutory. Claim 33 is directed toward a signal which is a form of energy. Signals do not make up one of the statutory categories of invention, i.e. a method, a device, an article of manufacture, or a composition. Therefore, both claims are non-statutory. See M.P.E.P. 2106 for further clarification.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The cited claim details an electric signal for execution in a computer of a method but details method steps. It cannot be determined what the signal entails. The claims appear to be a method based on the phrase "the method comprising the steps of". However, there appears to be some essential correspondence missing in the relation of the electric signals to the method. There appears to be a gap between "electric signals for execution in a computer" and the cited method with its steps accordingly. Does the signals initiate the computer to perform the method? Does the signals having instructions that perform the steps?

Response to Arguments

10. Applicant's arguments filed March 3, 2006 have been fully considered but they are not persuasive. Applicant argues that neither Rothrock nor Zhu teaches the limitation of control is returned to a client coupled to the first system whether or not the second system has completed processing the object change set. The examiner disagrees. As detailed above Rothrock teaches using deferred synchronization when performing the synchronization between objects. This entails allowing a client, i.e. a process, etc., to perform a change and issue a change notification to another system such that the process can continue to perform local changes regardless of the whether or not the other system has completed the initial change notice. Therefore, Rothrock teaches the limitation as disclosed in the claims.

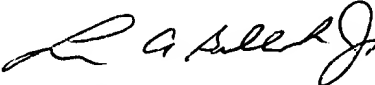
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (571) 272-3759. The examiner can normally be reached on Monday-Friday, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 13, 2006


LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER